

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Withdrawn): An isolated protein isoform of an AIB1 transcriptional coactivator.

Claim 2 (Withdrawn): The isoform of claim 1, which is a stronger transcriptional coactivator as compared to wild-type AIB1.

Claim 3 (Withdrawn): The isoform of claim 1, wherein transcriptional coactivation is measured by an in vitro transfection assay.

Claim 4 (Withdrawn): The isoform of claim 1, which coactivates transcription induced by a nuclear receptor.

Claim 5 (Withdrawn): The isoform of claim 4, wherein the nuclear receptor is a bile acid receptors, peroxisome proliferator receptor, a retinoid receptor, a steroid receptor, a thyroid receptor, or a vitamin D receptor.

Claim 6 (Withdrawn): The isoform of claim 5, wherein the steroid receptor is an estrogen receptor or a progesterone receptor.

Claim 7 (Withdrawn): The isoform of claim 1, which coactivates transcription by binding to and enhancing activity of a transcription factor.

Claim 8 (Withdrawn): The isoform of claim 7, wherein the transcription factor is TEF.

Claim 9 (Withdrawn): The isoform of claim 1, which coactivates signaling of a growth factor.

Claim 10 (Withdrawn): The isoform of claim 9, wherein the growth factor is EGF or FGF.

Claim 11 (Withdrawn): The isoform of claim 1, which is over expressed in a cancerous tissue.

Claim 12 (Withdrawn): The isoform of claim 1, which is under expressed in a cancerous tissue.

Claim 13 (Withdrawn): The isoform of claim 11, wherein the cancerous tissue comprises breast tissue, gastrointestinal tissue, head and neck tissue, metastatic tissue, neuroblastoma tissue, ovarian tissue, pancreatic tissue, prostate tissue, stomach tissue, cell-type specific tumors, or combinations thereof.

Claim 14 (Withdrawn): The isoform of claim 1, which contains a deletion.

Claim 15 (Withdrawn): The isoform of claim 14, wherein the deletion comprises all or significant portions of exon 3.

Claim 16 (Withdrawn): The isoform of claim 14, wherein the deletion comprises a binding domain.

Claim 17 (Withdrawn): The isoform of claim 16, wherein the binding domain is selected from the group consisting of the domains bHLH, PAS A, PAS B, RID, CID and the exons of wild-type AIB1, and portions and combinations thereof.

Claim 18 (Currently amended): An isolated nucleic acid sequence[[s]] that encodes [[the]] a steroid receptor coactivator amplified in breast (AIB1) protein isoform, wherein said isoform contains a deletion of exon 3 in the amino terminus of the AIB1 protein of claim 1.

Claim 19 (Currently amended) The nucleic acid of claim 18, wherein the isoform is [[?]] Δ 3-AIB1, and said nucleic acid comprises the exon junction sequence as shown in SEQ ID NO:3.

Claim 20 (Original): A vector that contains the nucleic acid of claim 18.

Claim 21 (Original): A recombinant cell that contains the nucleic acid of claim 18.

Claim 22 (Withdrawn): A diagnostic kit for the detection of cancer comprising chemical substances that are specifically reactive to the isoform of claim 1.

Claim 23 (Withdrawn): The diagnostic kit of claim 22, wherein the chemical substances are antibodies or antibody fragments.

Claim 24 (Withdrawn): A diagnostic kit for the detection of cancer comprising chemical substances that are specifically reactive to the nucleic acid of claim 18.

Claim 25 (Withdrawn): The diagnostic kit of claim 24, wherein the chemical substances are nucleic acids that are complementary to said nucleic acid.

Claim 26 (Withdrawn): An antibody or antibody fragment that is specifically reactive to the isoform of claim 1.

Claim 27 (Withdrawn): The antibody or antibody fragment of claim 26, which is an IgG.

Claim 28 (Withdrawn): A nucleic acid that hybridizes under stringent hybridization conditions to the nucleic acid of claim 18.

Claim 29 (Withdrawn): A method for the detection of cancer in a patient comprising:

contacting a biological sample obtained from said patient with one or more chemical substances that specifically bind to the isoform of claim 1; and

detecting binding.

Claim 30 (Withdrawn): The method of claim 29 further comprising comparing the relative amount of isoform in said sample with the amount of wild-type AIB1 protein in said sample to determine a stage of the cancer.

Claim 31 (Withdrawn): A method for the detection of cancer in a patient comprising:

contacting a biological sample obtained from said patient with one or more chemical substances that specifically bind to the nucleic acid of claim 18; and

detecting binding.

Claim 32 (Withdrawn): The method of claim 31 further comprising comparing the relative amount of isoform in said sample with the amount of wild-type AIB1 mRNA in said sample to determine a stage of the cancer.

Claim 33 (Withdrawn): The method of claim 32 wherein the stage comprises a hormone-independent phenotype.

Claim 34 (Withdrawn): A pharmaceutical composition comprising an agent that specifically binds to the isoform of claim 1 and prevents a coactivation of a transcription factor when administered to a patient.

Claim 35 (Withdrawn): The pharmaceutical composition of claim 34, further comprising a pharmaceutically acceptable carrier.

Claim 36 (Withdrawn): An siRNA that inhibits expression of a transcriptional coactivator protein.

Claim 37 (Withdrawn): The siRNA of claim 36, wherein the coactivator protein is selected from the group consisting of Src-1, Src-2, Src-3, and isoforms, fragments and combinations thereof.

Claim 38 (Withdrawn): The siRNA of claim 36, wherein the isoform is $\Delta 3$ -AIB1.

Claim 39 (Withdrawn): The siRNA of claim 36, which binds to a mRNA that encodes $\Delta 3$ -AIB1.

Claim 40 (Withdrawn): The siRNA of claim 36, which comprises sequences from each side of a binding domain of AIB1.

Claim 41 (Withdrawn): The siRNA of claim 40, wherein the binding domain is selected from the group consisting of the domains bHLH, PAS A, PAS B, RID, CID and combinations thereof.

Claim 42 (Withdrawn): The siRNA of claim 36, which comprises nucleic acid strands from about 5 to about 16 nucleotides in length.

Claim 43 (Withdrawn): A pharmaceutical composition comprising:
the siRNA of claim 36; and
a pharmaceutically acceptable carrier.

Claim 44 (Withdrawn): The composition of claim 43 wherein the pharmaceutically acceptable carrier is selected from the group consisting of alcohols, buffers, fatty acids, glycerol, oils, polysaccharides, saccharides, salts, sugars, water, and combinations thereof.

Claim 45 (Withdrawn): The composition of claim 43, further comprising an anti-neoplastic agent effective in the treatment of cancer.

Claim 46 (Withdrawn): The composition of claim 45, wherein the anti-neoplastic agent is selected from the group consisting of agents that inhibit cell growth, agents that inhibit cell proliferation, agents that inhibit cellular differentiation, anti-angiogenic agents, antibodies, antibody fragments, anti-sense agents, chemical agents, cytokines, toxins, and combinations thereof.

Claim 47 (Withdrawn): A method for treating or preventing a tumor comprising administering to a patient a therapeutically effective dose of the pharmaceutical composition of claim 43.

Claim 48 (Withdrawn): The method of claim 47, wherein administration is by direct injection to the tumor.

Claim 49. (Withdrawn): The method of claim 47, further comprising administering additional tumorigenic therapy to said patient.

Claim 50 (Withdrawn): The method of claim 49, wherein the additional tumorigenic therapy is selected from the group consisting of drug therapy, radiation therapy, surgery, and combinations thereof.

Claim 51 (Withdrawn): A transgenic animal comprising a recombinant gene that encodes the isoform of claim 1.

Claim 52 (Withdrawn): The animal of claim 51, which is a mouse.

Claim 53 (Withdrawn): A method for creating the transgenic animal of claim 51.